

REMARKS

Claims 1-18 and 22-31 are pending in the application. Claims 1-6, 15-17, and 22-25 were rejected, and claims 7-14, 18, and 26-31 were objected to. Applicant requests no further claim amendments be entered at this time. Accordingly, claims 1-18 and 22-31 as previously presented remain active in the application. In view of the following remarks, reconsideration of the application is respectfully requested.

As a preliminary matter, Applicant respectfully calls the Examiner's attention to the new docket number and the new power of attorney and change of correspondence address submitted herewith, and requests that any inquiry be directed to the undersigned at the new address and telephone number, and with reference to the new docket number.

Applicant appreciates the Examiner's detailed response to Applicant's previous remarks. Applicant respectfully requests that the Examiner consider the following comments regarding numbered paragraphs 3-5 of the Final Office Action.

Paragraph 3 of the Final Office Action reminds the Applicant that a general allegation that claims define a patentable invention is insufficient to patentably distinguish a claim from applied references. In Applicant's view, much more than a general allegation was made. Applicant illustrated that Braff's usage of something called an "epoch queue" did not serve as the claimed programmable interleaving table element with entries identifying a queue with an epoch value (9/1/04 Office Action Response, p. 10, ¶ 6 to p. 11, ¶ 1). Applicant pointed out that Braff has no pointer register as claimed, (*Id.*, p. 11, ¶ 2). Applicant illustrated that Braff's simple round-robin queue sequencer failed to meet the limitations of the claim 15 queue sequencer (*Id.*, p. 11, ¶ 3). Finally, Applicant stated that the rejection failed to show the existence of these elements in the Duffield reference (*Id.*, p. 11, ¶ 4). Thus Applicant specifically pointed to elements of the claims missing from the references.

Paragraph 4 of the Final Office Action states that Applicant asserted at page 10, paragraph five, that there is no motivation to combine Duffield and Braff. What Applicant asserted, however, was that the combination of Duffield and Braff fails to present a *prima facie* case of obviousness (*Id.*, p. 10, ¶ 5).

A *prima facie* case of obviousness consists of more than a motivation to combine. Before two references can be combined to make a *prima facie* case, the rejection must demonstrate that the two references teach or suggest all elements of the claimed invention—this is the basic criteria required for a *prima facie* case that Applicant specifically argues is missing from the references and the rejection. See, e.g., *Manual of Patent Examining Procedure*, § 2143, Basic Requirements of a *Prima Facie* Case of Obviousness (“[f]inally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.”). A *prima facie* case of obviousness is therefore lacking when the Examiner has not shown where each claim limitation is supported in the references, and the Applicant does not acquiesce in a general assertion by the Examiner that the references teach the claim limitations. Such is the case here, where the claims are not drawn to a generic scheduler, but to one with specific claimed qualities not taught or suggested by the references. A *prima facie* case must demonstrate those claimed qualities in the prior art. The obviousness case as presently constituted does not.

It is Applicant’s understanding that Paragraph 5 of the Final Office Action is an attempt to show the existence in the references of the elements of claim 15. Applicant has separated Paragraph 5 into groups of sentences directed toward each element of claim 15, and responds below under a heading indicating the element. Applicant also responds to the body of the rejection taken under 35 U.S.C. § 103(a) with respect to each of claims 1-6, 15-17, and 22-25.

Claim 15—“A programmable interleaving table having multiple entries, each entry identifying a queue with an epoch value”

As a matter of clarification, claim 15 does not claim “epoch queues” as stated in Paragraph 5. The programmable interleaving table claim limitation requires that the table contain entries “identifying a queue with an epoch value.” The rejection asserts that Braff’s MID/CID table 404 discloses the claimed interleaving table. This cannot be correct—MID/CID table 404 merely contains entries to associate a packet’s Message ID with a Channel ID. There is no disclosure in Braff of table 404 containing any other types of entries, particularly entries that identify a queue with an epoch value. The Examiner also admits that Braff’s transmitter server refers to no programmable table to sequence queues, but just moves from queue to queue such that the queues are “cyclically served exhaustively.” (Final Office Action, ¶ 5, l. 7.)

Claim 15—“A pointer register identifying a current entry in the programmable interleaving table”

The Examiner's comments appear to assert that Braff's packet "identifier information," which can include pointers to a packet in memory, teaches the claimed pointer register. Braff's pointers, however, point to packets, not to entries in a programmable interleaving table. Certainly, none of Braff's pointers identify "a current entry in the programmable interleaving table," or even an entry in Braff's table 404, which the Examiner asserts is an interleaving table.

Claim 15--“A queue sequencer to supply, for each epoch, a queue identifier based on the current entry in the programmable interleaving table, to charge the current entry for use of the epoch, and to step the pointer register to a next table entry when the current entry has been charged with use of a number of epochs set aside for that entry”

The Examiner's comments do not demonstrate Braff and Duffield teaching or suggesting a queue sequencer operating according to the claimed limitations. Braff mentions no interleaving table. Braff teaches "cyclically serving queues exhaustively" as previously discussed, which means that Braff's transmitter server uses no "number of epochs set aside for [a current interleaving table] entry" and does "charge the current entry for use of [an] epoch" and move "to a next table entry when the current entry has been charged with use" of its assigned epochs as claimed. The Examiner has pointed to nothing in Braff meeting these limitations.

As the Examiner points out, Duffield discloses a WFQ system that interleaves packets from different queues (Duffield, col. 5, ll. 37-45.) This fact is a common characteristic of all WFQ systems, as Applicant's prior art Figure 1 shows. But merely interleaving packets is insufficient to teach or suggest the claimed limitations, and Duffield does not disclose using the claimed interleaving table to implement a WFQ system. Duffield additionally discloses selecting a queue according to statistics such as Longest Delay First and Least Time to Overflow and other "state dependent variables", col. 5, ll. 4-34. Selection of a queue based on a state dependent variable suggests away, if anything, from an interleaving table approach. Duffield's approach certainly fails to teach or suggest the specific limitations of a queue sequencer set out in claim 15.

Claim 16—a “pointer register compris[ing] multiple pointer entries, each pointer entry identifying a current entry, in the programmable interleaving table, corresponding to that pointer entry.”

The Examiner has not identified a teaching or suggestion in the prior art for a multi-entry pointer register into the programmable interleaving table. Applicant finds no such teaching or suggestion in the references.

Claim 17—a programmable interleaving table that comprises multiple segments, “each pointer entry identifying table entries within a corresponding one of the interleaving table segments.”

The Examiner has not identified a teaching or suggestion in the prior art for a segmented interleaving table, each pointer in the multi-entry pointer register pointing to a corresponding segment. Applicant finds no such teaching or suggestion in the references.

Claim 1 and Claim 22

Method claim 1 and apparatus claim 22 are patentable at least for the same reasons as those presented above for the patentability of apparatus claim 15. For the sake of brevity, those remarks are not repeated here.

Claims 2 and 23—“the number of entries in the programmable interleaving table exceeds the number of queues, such that at least some queues are identified more than once in the table”

The Examiner has not identified a teaching or suggestion in the prior art for an interleaving table with more entries than queues. Applicant finds no such teaching or suggestion in the references.

Claim 3—“the epoch value for each entry is a common value shared by all entries”

The Examiner has not identified a teaching or suggestion in the prior art for queuing based on a table that has no explicit weights for interleaving table entries but has more entries than queues. Applicant finds no such teaching or suggestion in the references.

Claim 4—“the epoch value for each entry is based on the queue identified with the entry”

The Examiner has not identified a teaching or suggestion in the prior art for epoch values based on the queue identified with an interleaving table entry. Applicant finds no such teaching or suggestion in the references.

Claims 5 and 24—“the epoch value for each entry is a programmable value occupying a field of that entry”

The Examiner has not identified a teaching or suggestion in the prior art for an interleaving table with entries having a programmable field for an epoch value. Applicant finds no such teaching or suggestion in the references.

Claim 6 and 25—“each entry comprises an epoch counter field, and wherein charging an entry for use of an epoch comprises changing the value of the epoch counter field by one”

The Examiner has not identified a teaching or suggestion in the prior art for charging entries for use of an epoch by changing the value of an epoch counter in the entry. Applicant finds no such teaching or suggestion in the references.

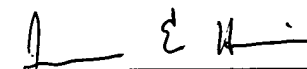
In summary, the comments above further illustrate that the instant rejection must fail for each rejected claim, as a *prima facie* case of obviousness has not been properly supported by a showing of the existence of all claimed elements in a prior art reference. Applicant respectfully requests that the 35 U.S.C. § 103(a) rejection be withdrawn and that all claims be allowed to proceed to issuance.

Claims 7-14, 18, and 26-31 were identified as containing allowable subject matter. In view of the arguments presented above in favor of the patentability of the independent claims from which these claims depend, Applicant has elected not to rewrite these claims at the present time.

For the foregoing reasons, reconsideration and allowance of claims 1-18 and 22-31 of the application is solicited. The Examiner is encouraged to telephone the undersigned at (512) 867-8502 if it appears that an interview would be helpful in advancing the case.

Respectfully submitted,

HAYNES and BOONE, LLP

A handwritten signature in black ink, appearing to read 'James E. Harris', is written over a horizontal line.

James E. Harris
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